

# WEST Search History





DATE: Wednesday, August 24, 2005

Hide?	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
		<i>DB=USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L33	L31 and ((dynamic or configurable or chang\$4) same (path\$4 or connection or wire or line)) and drive	35
<input type="checkbox"/>	L32	L31 and ((dynamic or configurable or chang\$4) same (path\$4 or connection or wire or line))	43
<input type="checkbox"/>	L31	L30 and (display or visual)	93
<input type="checkbox"/>	L30	L29 and RAID	188
<input type="checkbox"/>	L29	L18 and "load balancing"	806
<input type="checkbox"/>	L28	L18 and "LUN management" and "load balancing" and (RAID same optimize)	0
<input type="checkbox"/>	L27	L25 and (raid same (group or set or selection))	87
<input type="checkbox"/>	L26	L25 and group	2072
<input type="checkbox"/>	L25	L24 and L23	3088
<input type="checkbox"/>	L24	L21 and ((path\$4 or connection or line or bus) same (display or graph\$4))	11565
<input type="checkbox"/>	L23	L21 and L22	3829
<input type="checkbox"/>	L22	L20 and ((dynamic or configurable or reconfigurable or re-configurable or changable or manag\$4) same (path\$4 or connection or connections or bus or line or lines))	5171
<input type="checkbox"/>	L21	L20 and (graph\$4 or display)	15949
<input type="checkbox"/>	L20	L18 and ((array or raid or distributed or matrix or backup) same (drive or drives or storage or non-volatile or memory))	21586
<input type="checkbox"/>	L19	L18 and ((array or raid or distributed or matrix or backup) same (drive or drives or storage or non-volatile))	15677
<input type="checkbox"/>	L18	2004	171673
<input type="checkbox"/>	L17	L16 and L4 and L3 and L2 and L1	0
<input type="checkbox"/>	L16	345	163221
<input type="checkbox"/>	L15	6608635.pn.	1
<input type="checkbox"/>	L14	6608635.pn.	1
<input type="checkbox"/>	L13	5408597.pn.	1
<input type="checkbox"/>	L12	5408597.pn.	1
<input type="checkbox"/>	L11	5333254.pn.	1
<input type="checkbox"/>	L10	5333254.pn.	1
<input type="checkbox"/>	L9	5295244.pn.	1
<input type="checkbox"/>	L8	5295244.pn.	1
<input type="checkbox"/>	L7	5295243.pn.	1
<input type="checkbox"/>	L6	5295243.pn.	1
<input type="checkbox"/>	L5	715/734 715/736	24

<input type="checkbox"/>	L4	711/114 711/115 711/161 711/162 711/170	5514
<input type="checkbox"/>	L3	707/204	1923
<input type="checkbox"/>	L2	703/21	463
<input type="checkbox"/>	L1	710/2 710/8 710/13 710/15 710/16 710/17 710/19 710/42 710/43	3740

END OF SEARCH HISTORY

File 347:JAPIO Nov 1976-2005/Apr(Updated 050801)

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File 350:Derwent WPIX 1963-2005/UD,UM &UP=200553

(c) 2005 Thomson Derwent

File 371:French Patents 1961-2002/BOPI 200209

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Set	Items	Description
S1	10	DISKDRIVE? OR DISCDRIVE?
S2	9921	HARDDRIVE? OR CDD? ? OR HDD? ? OR FDD? ?
S3	1161784	DRIVE OR DRIVES OR MICRODRIVE? OR SUPERDRIVE? OR MINIDRIVE?
S4	58419	(HARDDISK? OR HARDDISC? OR OPTICALDIS? OR VIDEODISK? OR VI- DEODISC? OR LASERDISK? OR LASERDISC? OR DISK? ? OR DISC? ?) (1- W)S3
S5	17938	(DISCETTE? OR DISKETTE? OR HARD OR WINCHESTER OR EIDE OR I- DE OR ARRAY? ? OR RAID OR DISTRIBUTED OR MATRIX OR BACKUP) (1W- )S3
S6	2645	(BACK()UP OR SACD? ? OR DASD? ? OR NASD? ? OR DVD? ? OR SV- CD? ?) (1W)S3
S7	1852800	STORAGE? ? OR NONVOLATILE? OR MEMORY? OR MEMORIES OR NV OR NVM OR NVRAM OR NVS OR ROM OR ROMS
S8	35531	NON() (VOLATILE OR ERASEAB? OR ERASAB?)
S9	4580	(DISTRIBUTED OR MATRIX OR BACKUP OR BACK()UP) (1W)S7:S8
S10	2874417	PATH? ? OR PATHWAY? ? OR ROUTE? ? OR ROUTING? ? OR CONNECT- ION? ? OR LINE OR LINES OR BUS OR BUSES OR BUSSES
S11	73273	S10(5N) (DISPLAY? OR GRAPH???? ? OR GRAPHIC???? ? OR VISUAL? OR VIEW??? ? OR RENDER?)
S12	57626	S10(5N) (SHOW? ? OR SHOWING OR SHOWED OR OBSERV? OR APPEAR?)
S13	170488	S10(5N) (CHANG???? ? OR DYNAMIC? OR CONFIGUR? OR RECONFIGUR? OR MANAG??? ? OR MANAGEMENT? ? OR ARRANG???? ? OR ARRANGEMEN- T?)
S14	674	S10(5N)REARRANG?
S15	66289	(S1:S3 OR S7:S8) (3N) (REMOV??? ? OR INCREAS? OR DECREAS? OR ADD OR ADDS OR ADDED OR ADDING OR SUBTRACT? OR ADDITION?)
S16	13562	(S1:S3 OR S7:S8) (3N) (INCREM? OR DECREM? OR ELIMINAT? OR WI- THDRAW? OR DELET???? ?)
S17	622	S15:S16 AND S11:S12
S18	11	S17 AND (S1:S2 OR S4:S6 OR S9)
S19	9490	S13:S14 AND S11:S12
S20	47	S19 AND (S1:S2 OR S4:S6 OR S9)
S21	55	S18 OR S20
S22	55	IDPAT (sorted in duplicate/non-duplicate order)
S23	55	IDPAT (primary/non-duplicate records only)
S24	47934	(S1:S3 OR S9 OR RAID OR ARRAY? ?) (5N) (CONFIGUR? OR RECONFI- GUR? OR MANAG??? ? OR MANAGEMENT? ? OR ARRANG???? ? OR ARRANG- EMENT?)
S25	222	(S1:S3 OR S9 OR RAID OR ARRAY? ?) (5N)REARRANG?
S26	514	S24:S25 AND S11:S12
S27	28	S26 AND (S1:S2 OR S4:S6 OR S9)
S28	10	S24:S25 AND S17
S29	10	S26 AND S15:S16
S30	1596581	PATH? ? OR PATHWAY? ? OR ROUTE? ? OR ROUTING? ? OR CONNECT- ION? ? OR BUS OR BUSES OR BUSSES
S31	32739	S30(5N) (DISPLAY? OR GRAPH???? ? OR GRAPHIC???? ? OR VISUAL? OR VIEW??? ? OR RENDER?)
S32	119	S24:S25 AND S31
S33	4	S32 AND (S1:S2 OR S4:S6 OR S9)
S34	37	S27:S29 OR S33
S35	25	S34 NOT S23
S36	25	IDPAT (sorted in duplicate/non-duplicate order)
S37	25	IDPAT (primary/non-duplicate records only)

? t23/9/12,15,17

23/9/12 (Item 12 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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016339918 \*\*Image available\*\*  
WPI Acc No: 2004-497815/200447  
XRPX Acc No: N04-393088

Computing system e.g. laser printer, has expansion bus bridge with set of instructions to control command registers for generating secondary expansion bus configuration cycle emulating transparent expansion bus configuration cycle

Patent Assignee: DAVIS B L (DAVI-I); MARTIN D J (MART-I)

Inventor: DAVIS B L; MARTIN D J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040109195	A1	20040610	US 2002310328	A	20021205	200447 B

Priority Applications (No Type Date): US 2002310328 A 20021205

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20040109195	A1	15	G06F-013/00	

Abstract (Basic): US 20040109195 A1

NOVELTY - The system has two level expansion buses which are connected to an expansion bus bridge. The bridge has number of command registers and a set of executable instructions stored in a memory for execution by the processor. The instructions control the command registers to generate a secondary expansion bus configuration cycle emulating a transparent expansion bus configuration cycle on one of the expansion buses.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) a method of routing expansion bus configuration operations in a system
- (b) a method of discovering expansion bus topology in a system
- (c) a system for printing an image comprising a source document generator and an image-forming system
- (d) a computer readable medium having computer executable instruction configured to discover an expansion bus topology
- (e) a computer readable medium having computer executable instruction configured to route expansion bus configuration operations.

USE - Used as a laser printer, inkjet printer, thermal printer and impact printer, and in a multipurpose device which combines a printing operation with other imaging operations such as copying, faxing, and scanning of image or document, and in other computing environment using a non standard PCI bus expansion system.

ADVANTAGE - The expansion bus bridge is provided to overcome the limitations on configuration cycle generation in an EIO controller. The expansion bus bridge provides expansion for the printer by facilitating more capabilities through the addition of additional expansion slots for each bridge card used in the system. The system increases retrofit expansion capability by facilitating the addition of peripheral devices such as hard disk drive, an IEEE 1394 high-speed serial bus card, network card, and removable media storage device.

DESCRIPTION OF DRAWING(S) - The drawing shows a flow diagram of a

bus topology and expansion device discovery process.  
pp; 15 DwgNo 5/6  
Title Terms: COMPUTATION; SYSTEM; LASER; PRINT; EXPAND; BUS; BRIDGE; SET;  
INSTRUCTION; CONTROL; COMMAND; REGISTER; GENERATE; SECONDARY; EXPAND; BUS  
; CONFIGURATION; CYCLE; EMULATION; TRANSPARENT; EXPAND; BUS;  
CONFIGURATION; CYCLE  
Derwent Class: T01; T04; W02  
International Patent Class (Main): G06F-013/00  
International Patent Class (Additional): G06F-003/12  
File Segment: EPI  
Manual Codes (EPI/S-X): T01-S03; T04-G02; T04-G03; T04-G04; T04-G10A;  
W02-J02B; W02-J05C

23/9/15 (Item 15 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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015960585 \*\*Image available\*\*  
WPI Acc No: 2004-118426/200412  
XRPX Acc No: N04-094612

Dynamic data routing method for drive array controller, involves  
selecting data paths for transferring data from source to destination  
device based on received cache memory address

Patent Assignee: HEWLETT-PACKARD DEV CO LP (HEWP )  
Inventor: BRINKMANN H E; CALLISON R A  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6675253	B1	20040106	US 2000542309	A	20000404	200412 B

Priority Applications (No Type Date): US 2000542309 A 20000404

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6675253	B1	14	G06F-013/00	

Abstract (Basic): US 6675253 B1

NOVELTY - The data from a source device is transferred to particular cache memory in destination device in storage controller, through data path selected corresponding to cache memory address received. The data paths each have memory controller to control access to corresponding cache memory.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) storage controller;
- (2) data handling system;
- (3) drive array controller operating method.

USE - For dynamically routing data across multiple data paths from a source to destination within storage controller (claimed) e.g. disk drive array controller, and for data handling system (claimed).

ADVANTAGE - Provides flexible and dynamic routing of data to desired cache memory, thereby enabling sharing and effective use of memory and provides optimized bus performance.

DESCRIPTION OF DRAWING(S) - The figure shows flowchart explaining dynamic data routing process.

pp; 14 DwgNo 4/5  
Title Terms: DYNAMIC; DATA; ROUTE; METHOD; DRIVE; ARRAY; CONTROL; SELECT;  
DATA; PATH; TRANSFER; DATA; SOURCE; DESTINATION; DEVICE; BASED; RECEIVE;  
CACHE; MEMORY; ADDRESS

Derwent Class: T01; T03  
International Patent Class (Main): G06F-013/00  
International Patent Class (Additional): G06F-015/173  
File Segment: EPI  
Manual Codes (EPI/S-X): T01-C01A; T01-H01B1A; T01-H03A; T01-H05B1;  
T01-H05B2; T03-A08A5

23/9/17 (Item 17 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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015839221 \*\*Image available\*\*  
WPI Acc No: 2003-901425/200382  
Related WPI Acc No: 2003-670147; 2003-901424  
XRPX Acc No: N03-719770

**Modular server system for Internet service, has blade that stores  
operating system software for server blades, and hard disk drives  
that provisions each server blade with operating system software**

Patent Assignee: RIETZE P D (RIET-I); WHITCOMBE B (WHIT-I)

Inventor: RIETZE P D; WHITCOMBE B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030210522	A1	20031113	US 200186410	A	20011120	200382 B
			US 2003456459	A	20030605	

Priority Applications (No Type Date): US 200186410 A 20011120; US  
2003456459 A 20030605

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030210522	A1	12	G06F-001/16	Div ex application US 200186410

Abstract (Basic): US 20030210522 A1

NOVELTY - The system has a storage blade (300), a **hard disk drive** controller (330), and a set of server blades (110) connected to multiple interfaces. Each server and storage blade includes a system **management bus** connected to a system **management bus** of a midplane (170). The blade stores operating system (OS) software for the server blades. **Hard disk drives** (310, 320) provision each server blade with the OS software.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) a method to provision a number of servers
- (b) an article having a storage medium with instructions executed by a processor to provision a number of servers.

USE - Used in a computer data center for Internet service.

ADVANTAGE - The system improves OS boot performance by decreasing the number of the storage blades or the **hard disk drives** and reduces repair, upgrade and equipment costs.

DESCRIPTION OF DRAWING(S) - The drawing **shows** a storage blade having **connection** with server blades via a midplane.

Server blades (110)  
Midplane (170)  
Storage blade (300)  
Integrated drive electronics (IDE) **hard disk drives** (310, 320)

**Hard disk drive** controller (330)

Memory (335)

pp; 12 DwgNo 3/5

Title Terms: MODULE; SERVE; SYSTEM; SERVICE; BLADE; STORAGE; OPERATE;

SYSTEM; SOFTWARE; SERVE; BLADE; HARD; DISC; DRIVE; PROVISION; SERVE;  
BLADE; OPERATE; SYSTEM; SOFTWARE  
Derwent Class: T01; T03  
International Patent Class (Main): G06F-001/16  
International Patent Class (Additional): H05K-005/00; H05K-007/00  
File Segment: EPI  
Manual Codes (EPI/S-X): T01-H01B1; T01-H07A; T01-L02B; T01-M02A1A; T01-S03;  
T03-A08A1C; T03-A10E3; T03-N01

9/1

DIALOG(R)File 350:Derwent WPIX  
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013491998      \*\*Image available\*\*

WPI Acc No: 2000-663941/200064

XPX Acc No: N00-491964

**Acyclic high speed serial cable bus for file server system, includes shift registers which enable some communication ports of concentration to access specific disk drives , such that closed bus loop is not formed**

Patent Assignee: INT BUSINESS MACHINES CORP (IBM )

Inventor: CHISHOLM D R; MCNEILL A B

Number of Countries: 001    Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6115764	A	20000905	US 94312854	A	19940927	200064 B

Priority Applications (No Type Date): US 94312854 A 19940927

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6115764	A		8 G06F-013/00	

Abstract (Basic): US 6115764 A

NOVELTY - Physical layer concentrators (50) are connected to communication ports of **hard disk drives** (56). TPA bias source coupled between concentrators and driver, enables some communication ports of concentrators to access corresponding disk drives. The shift registers (60) of concentrators store different patterns such that both concentrators do not access same disk drives and hence do not form closed bus loop.

DETAILED DESCRIPTION - Communication receivers in the communication port of the disk drives receive input signal from other communication ports and a communication driver outputs signal to the other ports. A port comparator compares signal received by the receivers with a reference signal to determine whether that port is connected with the other communication port of the disk drive in the serial bus which conforms to P1394 standard.

USE - For providing redundant **path** access to star **configured** devices such as RAID form disk drives in file server system.

ADVANTAGE - The PHY concentrators allow star or point-to-point connections for multiple nodes and allows removal of defective devices without disturbing packet repeater path or requiring recabling.

DESCRIPTION OF DRAWING(S) - The figure **shows** the block diagram of redundant path access system.

Physical layer concentrators (50)

**Hard disk drive** (56)

Shift register (60)

pp; 8 DwgNo 6/7

Title Terms: ACYCLIC; HIGH; SPEED; SERIAL; CABLE; BUS; FILE; SERVE; SYSTEM; SHIFT; REGISTER; ENABLE; COMMUNICATE; PORT; CONCENTRATE; ACCESS; SPECIFIC ; DISC; DRIVE; CLOSE; BUS; LOOP; FORMING

Derwent Class: T01

International Patent Class (Main): G06F-013/00

File Segment: EPI

Manual Codes (EPI/S-X): T01-G03; T01-H01B1A

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DIALOG(R)File 350:Derwent WPIX  
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016685643     \*\*Image available\*\*  
WPI Acc No: 2005-009924/200501  
Related WPI Acc No: 2005-252371  
XRPX Acc No: N05-007790

**Segregated user interface for e.g. disk drive system, has component object module/dynamic link library interface module configuring failover driver based on detected status of controller and storage devices**

Patent Assignee: ADAPTEC INC (ADAP-N)

Inventor: CHENG E; DING Y; WU C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6823477	B1	20041123	US 2001768860	A	20010123	200501 B

Priority Applications (No Type Date): US 2001768860 A 20010123

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6823477	B1	20	G06F-011/00	

Abstract (Basic): US 6823477 B1

NOVELTY - The interface (402) has a failover graphical user interface (GUI) module (404) receiving parameters of a multi-path failover system. A component object module (COM)/dynamic link library (DLL) interface module (406) detects current status of controller and storage devices. The COM/DLL interface module configures a failover filter driver using the received configuration parameters, based on the detected status.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(A) a method of **configuring** parameters in a multi- **path** failover system

(B) a system for **configuring** parameters in a multi- **path** failover system.

USE - Used in a multi-path computer storage system e.g. disk drive system, for **configuring** parameter in a multi- **path** failover system (claimed).

ADVANTAGE - The COM/DLL interface module configures the failover driver based on the detected status of the controller and storage devices for providing continuous access to the input/output device of the storage system. The detection of the controller and storage devices status provides masking abilities to avoid the double logical drive letters for physical drives of the storage system.

DESCRIPTION OF DRAWING(S) - The drawing **shows** a multi-path computer storage system including a segregated interface to configure an intelligent failover system.

Failover filter driver (218)

Multi-path computer storage system (400)

Segregated user interface (402)

Failover graphical user interface module (404)

Component object module/dynamic link library interface module (406)

pp; 20 DwgNo 4/9

Title Terms: SEGREGATE; USER; INTERFACE; DISC; DRIVE; SYSTEM; COMPONENT; OBJECT; MODULE; DYNAMIC; LINK; LIBRARY; INTERFACE; MODULE; DRIVE; BASED; DETECT; STATUS; CONTROL; STORAGE; DEVICE

Derwent Class: T01; W01

International Patent Class (Main): G06F-011/00

File Segment: EPI

Manual Codes (EPI/S-X): T01-F05A; T01-F05B2; T01-F05E; T01-F05G; T01-F07;

T01-G05C; T01-H01B4; T01-H01B7; T01-J12B1; T01-J20B; T01-N02A2A;  
T01-N02A2D; W01-A06B5A; W01-A06B5B

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File 348:EUROPEAN PATENTS 1978-2005/Aug W02  
(c) 2005 European Patent Office  
File 349:PCT FULLTEXT 1979-2005/UB=20050818,UT=20050811  
(c) 2005 WIPO/Univentio  
File 324:German Patents Fulltext 1967-200532  
(c) 2005 Univention

Set	Items	Description
S1	228	DISKDRIVE? OR DISC DRIVE?
S2	14161	HARDDRIVE? OR CDD? ? OR HDD? ? OR FDD? ?
S3	857053	DRIVE OR DRIVES OR MICRODRIVE? OR SUPERDRIVE? OR MINIDRIVE?
S4	44434	(HARDDISK? OR HARDDISC? OR OPTICALDIS? OR VIDEODISK? OR VIDEO DISC? OR LASERDISK? OR LASERDISC? OR DISK? ? OR DISC? ?) (1W)S3
S5	35526	(DISCETTE? OR DISKETTE? OR HARD OR WINCHESTER OR EIDE OR IDE OR ARRAY? ? OR RAID OR DISTRIBUTED OR MATRIX OR BACKUP) (1W)S3
S6	2588	(BACK()UP OR SACD? ? OR DASD? ? OR NASD? ? OR DVD? ? OR SVCD? ?) (1W)S3
S7	1027745	STORAGE? ? OR NONVOLATILE? OR MEMORY? OR MEMORIES OR NV OR NVM OR NVRAM OR NVS OR ROM OR ROMS
S8	48081	NON() (VOLATILE OR ERASEAB? OR ERASAB?)
S9	5153	(DISTRIBUTED OR MATRIX OR BACKUP OR BACK()UP) (1W)S7:S8
S10	2682847	PATH? ? OR PATHWAY? ? OR ROUTE? ? OR ROUTING? ? OR CONNECTION? ? OR LINE OR LINES OR BUS OR BUSES OR BUSSES
S11	250236	S10(5N) (DISPLAY? OR GRAPH???? ? OR GRAPHIC???? ? OR VISUAL? OR VIEW??? ? OR RENDER?)
S12	506623	S10(5N) (SHOW? ? OR SHOWING OR SHOWED OR OBSERV? OR APPEAR?)
S13	458491	S10(5N) (CHANG???? ? OR DYNAMIC? OR CONFIGUR? OR RECONFIGUR? OR MANAG??? ? OR MANAGEMENT? ? OR ARRANG???? ? OR ARRANGEMENT?)
S14	1438	S10(5N) REARRANG?
S15	155543	(S1:S3 OR S7:S8) (3N) (REMOV??? ? OR INCREAS? OR DECREAS? OR ADD OR ADDS OR ADDED OR ADDING OR SUBTRACT? OR ADDITION?)
S16	25667	(S1:S3 OR S7:S8) (3N) (INCREM? OR DECREM? OR ELIMINAT? OR WITHDRAW? OR DELET???? ?)
S17	1333	S15:S16(20N)S11:S12
S18	76	S17(20N) (S1:S2 OR S4:S6 OR S9)
S19	35485	S13:S14(20N)S11:S12
S20	73	S19(20N) (S1:S2 OR S4:S6 OR S9)
S21	146	S18 OR S20
S22	346580	LOAD? ?(2N) BALANC? OR OPTIMI?
S23	29	S21 AND S22
S24	29	IDPAT (sorted in duplicate/non-duplicate order)
S25	28	IDPAT (primary/non-duplicate records only)
S26	537	S15:S16(20N)S11
S27	49	S26(20N) (S1:S2 OR S4:S5 OR S9)
S28	8797	S13:S14(20N)S11
S29	18	S28(20N) (S1:S2 OR S4:S5 OR S9)
S30	66	S27 OR S29
S31	55	S30 NOT S23
S32	55	IDPAT (sorted in duplicate/non-duplicate order)
S33	54	IDPAT (primary/non-duplicate records only)
S34	38	S33 AND AC=US/PR
S35	38	S34 AND AY=(1970:2004)/PR
S36	51	S33 AND PY=1970:2004
S37	52	S35:S36
S38	70954	*deleted* IC=G11B
S39	16	S21 AND S38
S40	13	S39 NOT (S23 OR S30)
S41	3797	IC='G11B-017'

S42 2929 IC='G11B-019'  
 S43 6 (S26 OR S28) AND S42  
 S44 8 S21/TI,AB,CM  
 S45 144653 (S1:S3 OR S9 OR RAID OR ARRAY? ?) (5N) (CONFIGUR? OR RECONFI-  
 GUR? OR MANAG??? ? OR MANAGEMENT? ? OR ARRANG???? ? OR ARRANG-  
 EMENT?)  
 S46 384 (S1:S3 OR S9 OR RAID OR ARRAY? ?) (5N)REARRANG?  
 S47 577 S45:S46(20N)S11  
 S48 7 S45:S46(20N)S26  
 S49 19 S47(20N) (S1:S2 OR S4:S5 OR S9)  
 S50 15 S47 AND IC=G11B  
 S51 9 S47(20N)S15:S16  
 S52 2141608 PATH? ? OR PATHWAY? ? OR ROUTE? ? OR ROUTING? ? OR CONNECT-  
 ION? ? OR BUS OR BUSES OR BUSSES  
 S53 70617 S52(5N) (DISPLAY? OR GRAPH???? ? OR GRAPHIC???? ? OR VISUAL?  
 OR VIEW??? ? OR RENDER?)  
 S54 124 S45:S46(20N)S53  
 S55 7 S54(20N) (S1:S2 OR S4:S5 OR S9)  
 S56 20 S54/TI,AB,CM  
 S57 3 S54 AND IC=G11B  
 S58 23 S56:S57  
 ?

File 347:JAPIO Nov 1976-2005/Apr(Updated 050801)  
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File 350:Derwent WPIX 1963-2005/UD,UM &UP=200553  
(c) 2005 Thomson Derwent  
File 348:EUROPEAN PATENTS 1978-2005/Aug W02  
(c) 2005 European Patent Office  
File 349:PCT FULLTEXT 1979-2005/UB=20050818,UT=20050811  
(c) 2005 WIPO/Univentio  
File 324:German Patents Fulltext 1967-200532  
(c) 2005 Univention

Set	Items	Description
S1	41290	AU=SUZUKI K?
S2	109125	(DISC? ? OR DISK? OR DISCETTE?) (1W)DRIVE? ? OR DISKDRIVE? - OR DISC DRIVE?
S3	1108	S2(10N) (PATH? ? OR PATHWAY? OR ROUTE? ? OR ROUTING? ?)
S4	2	S1 AND S3

4/9/1 (Item 1 from file: 347)  
DIALOG(R)File 347:JAPIO  
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07909299 \*\*Image available\*\*  
CONTROL METHOD OF STORAGE DEVICE, AND STORAGE DEVICE

PUB. NO.: 2004-022058 [JP 2004022058 A]  
PUBLISHED: January 22, 2004 (20040122)  
INVENTOR(s): SUZUKI KATSUKI  
KANO AZUMA  
APPLICANT(s): HITACHI LTD  
APPL. NO.: 2002-174948 [JP 2002174948]  
FILED: June 14, 2002 (20020614)  
INTL CLASS: G11B-033/14; G06F-001/20

#### ABSTRACT

PROBLEM TO BE SOLVED: To provide a control method of a storage device which is desirable for reducing power consumption of the device having a basic casing and an additional casing, and for reducing noise, and to provide the device.

SOLUTION: The storage device is provided with a basic casing 20 to which a storage device and a controller are mounted, an additional casing 30 to which a storage device and peripheral equipment are mounted and an FC-AL loop 60 that is a transmission **path** to connect a controller 71 and the **disk drive** 51 of the casing 20 and a disk drive 51 of the casing 30 so that these units are communicated with each other. The operation of the drive 51 of the casing 30 is controlled in accordance with the operating condition of the drive 51 of the casing 20 by the communication through the path and the operation of the peripheral equipment of the casing 30 is controlled in accordance with the operating condition of the disk drive 51.

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4/5/2 (Item 1 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
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01921096

Disk array apparatus and method for controlling the same

**Speicherplattenanordnungsgerat und Verfahren fur dessen Steuerung**

**Appareil de reseau de disques et procede de commande de celui-ci**

**PATENT ASSIGNEE:**

Hitachi Ltd., (204155), 6, Kanda Surugadai 4-chome, Chiyoda-ku, Tokyo,  
(JP), (Applicant designated States: all)

**INVENTOR:**

**Suzuki, Katsuyoshi, Hitachi Ltd** , Intel.Prop.Grp New MarunouchiBldg  
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Hirasawa, Akihisa, Hitachi Ltd, Intel.Prop.Grp New MarunouchiBldg 5-1-1  
Marunouchi, Chiyoda-ku Tokyo 100-8220, (JP)

**LEGAL REPRESENTATIVE:**

Holt, Daniel Richard et al (136361), Mewburn Ellis LLP York House 23  
Kingsway, London WC2B 6HP, (GB)

PATENT (CC, No, Kind, Date): EP 1548564 A2 050629 (Basic)

APPLICATION (CC, No, Date): EP 2005003365 040414;

PRIORITY (CC, No, Date): JP 2003145111 030522

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;  
HU; IE; IT; LI; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR

EXTENDED DESIGNATED STATES: AL; HR; LV; MK

RELATED PARENT NUMBER(S) - PN (AN):

EP 1486863 (EP 2004252186)

INTERNATIONAL PATENT CLASS: G06F-003/06

**ABSTRACT EP 1548564 A2**

An apparatus includes a controller and a plurality of disk drives. The controller has a communication control unit for accepting a data input/output request, a disk controller unit for controlling a disk drive, and a cache memory for temporarily storing data transferred between the communication control unit and the disk controller unit. The plurality of disk drives has different communication interfaces and connected to the disk controller unit to communicate with the disk controller unit.

ABSTRACT WORD COUNT: 76

**NOTE:**

Figure number on first page: 6

**LEGAL STATUS (Type, Pub Date, Kind, Text):**

Application: 050629 A2 Published application without search report

LANGUAGE (Publication,Procedural,Application): English; English; English

**FULLTEXT AVAILABILITY:**

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200526	946
SPEC A	(English)	200526	9443
Total word count - document A			10389
Total word count - document B			0
Total word count - documents A + B			10389

File 9:Business & Industry(R) Jul/1994-2005/Aug 22  
(c) 2005 The Gale Group  
File 16:Gale Group PROMT(R) 1990-2005/Aug 23  
(c) 2005 The Gale Group  
File 47:Gale Group Magazine DB(TM) 1959-2005/Aug 23  
(c) 2005 The Gale group  
File 148:Gale Group Trade & Industry DB 1976-2005/Aug 23  
(c)2005 The Gale Group  
File 160:Gale Group PROMT(R) 1972-1989  
(c) 1999 The Gale Group  
File 275:Gale Group Computer DB(TM) 1983-2005/Aug 23  
(c) 2005 The Gale Group  
File 570:Gale Group MARS(R) 1984-2005/Aug 23  
(c) 2005 The Gale Group  
File 621:Gale Group New Prod.Annou.(R) 1985-2005/Aug 23  
(c) 2005 The Gale Group  
File 636:Gale Group Newsletter DB(TM) 1987-2005/Aug 23  
(c) 2005 The Gale Group  
File 649:Gale Group Newswire ASAP(TM) 2005/Aug 11  
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Set	Items	Description
S1	259	DISKDRIVE? OR DISC DRIVE?
S2	56438	HARDDRIVE? OR CDD? ? OR HDD? ? OR FDD? ?
S3	2420112	DRIVE OR DRIVES OR MICRODRIVE? OR SUPERDRIVE? OR MINIDRIVE?
S4	267268	(HARDDISK? OR HARDDISC? OR OPTICALDIS? OR VIDEODISK? OR VIDEO DISC? OR LASERDISK? OR LASERDISC? OR DISK? ? OR DISC? ?) (1W)S3
S5	300118	(DISCETTE? OR DISKETTE? OR HARD OR WINCHESTER OR EIDE OR IDE OR ARRAY? ? OR RAID OR DISTRIBUTED OR MATRIX OR BACKUP) (1W)S3
S6	31239	(BACK()UP OR SACD? ? OR DASD? ? OR NASD? ? OR DVD? ? OR SVCD? ?) (1W)S3
S7	2712583	STORAGE? ? OR NONVOLATILE? OR MEMORY? OR MEMORIES OR NV OR NVM OR NVRAM OR NVS OR ROM OR ROMS
S8	19669	NON() (VOLATILE OR ERASEAB? OR ERASAB?)
S9	16488	(DISTRIBUTED OR MATRIX OR BACKUP OR BACK()UP) (1W)S7:S8
S10	21733958	PATH? ? OR PATHWAY? ? OR ROUTE? ? OR ROUTING? ? OR CONNECTION? ? OR LINE OR LINES OR BUS OR BUSES OR BUSSES
S11	215296	S10(5N) (DISPLAY? OR GRAPH???? ? OR GRAPHIC???? ? OR VISUAL? OR VIEW??? ? OR RENDER?)
S12	165264	S10(5N) (SHOW? ? OR SHOWING OR SHOWED OR OBSERV? OR APPEAR?)
S13	552362	S10(5N) (CHANG???? ? OR DYNAMIC? OR CONFIGUR? OR RECONFIGUR? OR MANAG??? ? OR MANAGEMENT? ? OR ARRANG???? ? OR ARRANGEMENT?)
S14	1003	S10(5N)REARRANG?
S15	271427	(S1:S3 OR S7:S8) (3N) (REMOV??? ? OR INCREAS? OR DECREAS? OR ADD OR ADDS OR ADDED OR ADDING OR SUBTRACT? OR ADDITION?)
S16	28840	(S1:S3 OR S7:S8) (3N) (INCREM? OR DECREM? OR ELIMINAT? OR WITHDRAW? OR DELET???? ?)
S17	1213	S15:S16(S)S11:S12
S18	208	S17(S) (S1:S2 OR S4:S6 OR S9)
S19	13300	S13:S14(S)S11:S12
S20	157	S19(S) (S1:S2 OR S4:S6 OR S9)
S21	17556783	PATH? ? OR PATHWAY? ? OR ROUTE? ? OR ROUTING? ? OR CONNECTION? ? OR BUS OR BUSES OR BUSSES
S22	60682	S21(5N) (DISPLAY? OR GRAPH???? ? OR GRAPHIC???? ? OR VISUAL? OR VIEW??? ? OR RENDER?)
S23	410	S15:S16(S)S22
S24	76	S23(S) (S1:S2 OR S4:S6 OR S9)
S25	3571	S13:S14(S)S22

S26	98	S25(S) (S1:S2 OR S4:S6 OR S9)
S27	173	S24 OR S26
S28	0	S27/2005
S29	106	RD S27 (unique items)
S30	131960	(S1:S3 OR S9 OR RAID OR ARRAY? ?) (5N) (CONFIGUR? OR RECONFI- GUR? OR MANAG??? ? OR MANAGEMENT? ? OR ARRANG???? ? OR ARRANG- EMENT?)
S31	200	(S1:S3 OR S9 OR RAID OR ARRAY? ?) (5N) REARRANG?
S32	151	S30:S31(S) S22
S33	90	S32(S) (S1:S2 OR S4:S6 OR S9)
S34	0	S33/2005
S35	71	S33 NOT (S27 OR FDDI)
S36	37	RD (unique items)
?		



36/3,K/31 (Item 5 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
(c) 2005 The Gale Group. All rts. reserv.

01586558 SUPPLIER NUMBER: 13445578 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
Trailblazer 1.1: Windows for utility novices. (Twisted Pine Software  
Corp.'s file management software) (Software Review) (Evaluation)  
Scisco, Peter  
PC Sources, v4, n3, p225(1)  
March, 1993  
DOCUMENT TYPE: Evaluation ISSN: 1052-6579 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 388 LINE COUNT: 00030

...ABSTRACT: shell separates the screen into five sections called slates. The Storage Slate displays icons for **disk drives**, files, directories and applications. The On Deck Slate is a setup area for file operations. It also displays the current time, date and position of the sun and moon. The **Path** Slate gives drive location. The **View** Slate is the largest of the five slates. It performs a variety of functions including file selection and directory creation and **management**. View Slate also displays **drive** information as icons, a hierarchy or directory trees. Some of Trailblazer's functions require steps...

DIALOG(R)File 16:Gale Group PROMT(R)  
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03925343 Supplier Number: 45671686 (USE FORMAT 7 FOR FULLTEXT)

**Next-Generation OS Proves Worth Wait**

Computer Reseller News, pS43

July 17, 1995

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 1430

... user's desires, which can be completely different than the physical directory structure on the **hard drive**. Unlike the old File **Manager**, Windows Explorer **displays** all drive **connections** in one window.

The Start menu, the single-most-prominent new interface aspect of Windows...

File 6:NTIS 1964-2005/Aug W2  
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File 2:INSPEC 1969-2005/Aug W2  
(c) 2005 Institution of Electrical Engineers  
File 8:Ei Compendex(R) 1970-2005/Aug W2  
(c) 2005 Elsevier Eng. Info. Inc.  
File 57:Electronics & Communications Abstracts 1966-2005/Jul  
(c) 2005 CSA.  
File 34:SciSearch(R) Cited Ref Sci 1990-2005/Aug W2  
(c) 2005 Inst for Sci Info  
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(c) 2005 CSA.  
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File 95:TEME-Technology & Management 1989-2005/Jul W3  
(c) 2005 FIZ TECHNIK  
File 99:Wilson Appl. Sci & Tech Abs 1983-2005/Jul  
(c) 2005 The HW Wilson Co.  
File 144:Pascal 1973-2005/Aug W2  
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File 266:FEDRIP 2005/Jun  
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(c) 1998 Inst for Sci Info  
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13  
(c) 2002 The Gale Group

Set	Items	Description
S1	18	DISKDRIVE? OR DISC DRIVE?
S2	28016	HARDDRIVE? OR CDD? ? OR HDD? ? OR FDD? ?
S3	434663	DRIVE OR DRIVES OR MICRODRIVE? OR SUPERDRIVE? OR MINIDRIVE?
S4	29279	(HARDDISK? OR HARDDISC? OR OPTICALDIS? OR VIDEODISK? OR VIDEO DISC? OR LASERDISK? OR LASERDISC? OR DISK? ? OR DISC? ?) (1W)S3
S5	15051	(DISCETTE? OR DISKETTE? OR HARD OR WINCHESTER OR EIDE OR IDE OR ARRAY? ? OR RAID OR DISTRIBUTED OR MATRIX OR BACKUP) (1W)S3
S6	889	(BACK()UP OR SACD? ? OR DASD? ? OR NASD? ? OR DVD? ? OR SVCD? ?) (1W)S3
S7	1696403	STORAGE? ? OR NONVOLATILE? OR MEMORY? OR MEMORIES OR NV OR NVM OR NVRAM OR NVS OR ROM OR ROMS
S8	9847	NON() (VOLATILE OR ERASEAB? OR ERASAB?)
S9	28694	(DISTRIBUTED OR MATRIX OR BACKUP OR BACK()UP) (1W)S7:S8
S10	4962182	PATH? ? OR PATHWAY? ? OR ROUTE? ? OR ROUTING? ? OR CONNECTION? ? OR LINE OR LINES OR BUS OR BUSES OR BUSSES
S11	85335	S10(5N) (DISPLAY? OR GRAPH???? ? OR GRAPHIC???? ? OR VISUAL? OR VIEW??? ? OR RENDER?)
S12	241113	S10(5N) (SHOW? ? OR SHOWING OR SHOWED OR OBSERV? OR APPEAR?)
S13	156312	S10(5N) (CHANG???? ? OR DYNAMIC? OR CONFIGUR? OR RECONFIGUR? OR MANAG??? ? OR MANAGEMENT? ? OR ARRANG???? ? OR ARRANGEMENT?)
S14	4438	S10(5N) REARRANG?
S15	57106	(S1:S3 OR S7:S8) (3N) (REMOV??? ? OR INCREAS? OR DECREAS? OR

ADD OR ADDS OR ADDED OR ADDING OR SUBTRACT? OR ADDITION?)  
 S16 5224 (S1:S3 OR S7:S8) (3N) (INCREM? OR DECREM? OR ELIMINAT? OR WI-  
 THDRAW? OR DELET???? ?)  
 S17 430 S15:S16 AND S11:S12  
 S18 56 S17 AND (S1:S2 OR S4:S6 OR S9)  
 S19 14626 S13:S14 AND S11:S12  
 S20 35 S19 AND (S1:S2 OR S4:S6 OR S9)  
 S21 91 S18 OR S20  
 S22 1 S21/2005  
 S23 86 S21 NOT (S22 OR FDDI)  
 S24 65 RD (unique items)  
 S25 33 S24 NOT (CDDP OR CDDO)  
 S26 28131 (S1:S3 OR S9 OR RAID OR ARRAY? ?) (5N) (CONFIGUR? OR RECONFI-  
 GUR? OR MANAG??? ? OR MANAGEMENT? ? OR ARRANG???? ? OR ARRANG-  
 EMENT?)  
 S27 400 (S1:S3 OR S9 OR RAID OR ARRAY? ?) (5N) REARRANG?  
 S28 339 S26:S27 AND S11:S12  
 S29 29 S27:S28 AND (S1:S2 OR S4:S6 OR S9)  
 S30 0 S26:S27 AND S17  
 S31 0 S28 AND S15:S16  
 S32 1 S29/2005  
 S33 21 S29 NOT (S32 OR S21 OR FDDI OR CDDP OR CDDO)  
 S34 14 RD (unique items)

? t25/7/15-16

25/7/15 (Item 5 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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04474057 Genuine Article#: TF529 Number of References: 37

**Title: ADVANCED COMPILER OPTIMIZATIONS FOR SPARSE COMPUTATIONS**

Author(s): BIK AJC; WIJSHOFF HAG

Corporate Source: LEIDEN UNIV, DEPT COMP SCI, DIV HIGH PERFORMANCE COMP, POB  
9512/2300 RA LEIDEN//NETHERLANDS/

Journal: JOURNAL OF PARALLEL AND DISTRIBUTED COMPUTING, 1995, V31, N1 (NOV  
15), P14-24

ISSN: 0743-7315

Language: ENGLISH Document Type: ARTICLE

Abstract: Regular data dependence checking on sparse codes usually results in very conservative estimates of the actual dependences occurring at run-time. Clearly, this is caused by the usage of compact data structures necessary to exploit sparsity in order to reduce storage requirements and computational time. However, if the compiler is presented with dense code and automatically converts it into code operating on sparse data structures, then the dependence information obtained by analysis of the original code can be used to exploit potential concurrency in the generated sparse code. In this paper, we explore synchronization generating and manipulating techniques based on this concept. (C) 1995 Academic Press Inc.

25/7/16 (Item 6 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2005 Inst for Sci Info. All rts. reserv.

04440646 Genuine Article#: TD260 Number of References: 16

**Title: LINEAR ALGEBRA CALCULATIONS ON A VIRTUAL SHARED-MEMORY COMPUTER**

Author(s): AMESTOY PR; DUFF IS; DAYDE MJ; MORERE P

Corporate Source: UNIV TOULOUSE 3, IRT, ENSEEIHT/F-31062 TOULOUSE//FRANCE/;  
CERFACS/F-31057 TOULOUSE//FRANCE/; UNIV TOULOUSE  
3, IRT, ENSEEIHT/F-31071 TOULOUSE//FRANCE/; RUTHERFORD APPLETON  
LAB/DIDCOT OX11 0QX/OXON/ENGLAND/

Journal: INTERNATIONAL JOURNAL OF HIGH SPEED COMPUTING, 1995, V7, N1 (MAR)  
, P21-43

ISSN: 0129-0533

Language: ENGLISH Document Type: ARTICLE

Abstract: We evaluate the impact of the memory hierarchy of virtual shared memory computers on the design of algorithms for linear algebra. On classical shared memory multiprocessor computers, block algorithms are used for efficiency. We study here the potential and the limitations of such approaches on globally addressable **distributed memory** computers. The BBN TC2000 belongs to this class of computers and will be used to illustrate our discussion.

We describe the implementation of Level 3 BLAS and examine the performance of some of the LAPACK routines. The impact of the number of processors with respect to the choice of the variants of classical matrix factorizations (for example, KJI, JKI, JIX for the LU factorization) is discussed. We also study the factorization of sparse matrices based on a multifrontal approach. The ideas introduced for the parallelization of full linear algebra codes are applied to the sparse case. We discuss and illustrate the limitations of this approach in sparse multifrontal factorization.

We show that the speed-ups obtained on the BBN TC2000 for the class of methods presented here are comparable to those obtained on more classical shared memory computers, such as the Alliant FX/80, the GRAY-2 and the IBM 3090/VF.

? t25/7/20-21,27

25/7/20 (Item 10 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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03927533 Genuine Article#: QT097 Number of References: 52

**Title: SPAR - A NEW ARCHITECTURE FOR LARGE FINITE-ELEMENT COMPUTATIONS**

Author(s): TAYLOR VE; RANADE A; MESSERSCHMITT DG

Corporate Source: NORTHWESTERN UNIV, DEPT ELECT ENGN & COMP

SCI/EVANSTON//IL/60208; UNIV CALIF BERKELEY, DEPT

EECS/BERKELEY//CA/94720

Journal: IEEE TRANSACTIONS ON COMPUTERS, 1995, V44, N4 (APR), P531-545

ISSN: 0018-9340

Language: ENGLISH Document Type: ARTICLE

Abstract: The finite element method is a general and powerful technique for solving partial differential equations. The computationally intensive step of this technique is the solution of a linear system of equations. Very large and very sparse system matrices result from large finite-element applications. The sparsity must be exploited for efficient use of memory and computational components in executing the solution step. In this paper we propose a scheme, called SPAR, for efficiently storing and performing computations on sparse matrices. SPAR consists of an alternate method of representing sparse matrices and an architecture that efficiently executes computations on the proposed data structure. The SPAR architecture has not been built, but we have constructed a register-transfer level simulator and executed the sparse matrix computations used with some large finite element applications. The simulation results demonstrate a 95% utilization of the floating-point units for some 3D applications. SPAR achieves high utilization of memory, memory bandwidth, and floating-point units when executing sparse matrix computations.

25/7/21 (Item 11 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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03769442 Genuine Article#: QE105 Number of References: 22

**Title: A CARTESIAN PARALLEL NESTED DISSECTION ALGORITHM**

Author(s): HEATH MT; RAGHAVAN P

Corporate Source: UNIV ILLINOIS, DEPT COMP SCI, 405 N MATHEWS

AVE/URBANA//IL/61801; UNIV ILLINOIS, NATL CTR SUPERCOMP

APPLICAT/URBANA//IL/61801

Journal: SIAM JOURNAL ON MATRIX ANALYSIS AND APPLICATIONS, 1995, V16, N1 (JAN), P235-253

ISSN: 0895-4798

Language: ENGLISH Document Type: ARTICLE

Abstract: This paper is concerned with the distributed parallel computation of an ordering for a symmetric positive definite sparse matrix. The purpose of the ordering is to limit fill and enhance concurrency in the subsequent Cholesky factorization of the matrix. A geometric approach to nested dissection is used based on a given Cartesian embedding of the graph of the matrix in Euclidean space. The resulting algorithm can be implemented efficiently on massively parallel, **distributed memory** computers. One unusual feature of the distributed algorithm is that its effectiveness does not depend on data locality, which is critical

in this context, since an appropriate partitioning of the problem is not known until after the ordering has been determined, The ordering algorithm is the first component in a suite of scalable parallel algorithms currently under development for solving large sparse linear systems on massively parallel computers.

25/7/27 (Item 1 from file: 144)  
DIALOG(R)File 144:Pascal  
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13424473 PASCAL No.: 98-0118168  
**Constant time graph algorithms on the reconfigurable multiple bus machine**  
TRAHAN J L; VAIDYANATHAN R; SUBBARAMAN C P  
Department of Electrical and Computer Engineering, Louisiana State University, Baton Rouge, Louisiana 70803-5901, United States; Department of Electrical and Computer Engineering, University of California at Irvine, Irvine, California 92717, United States  
Journal: Journal of parallel and distributed computing, 1997, 46 (1) 1-14  
ISSN: 0743-7315 Availability: INIST-20948; 354000078255170010  
No. of Refs.: 33 ref.  
Document Type: P (Serial) ; A (Analytic)  
Country of Publication: United States  
Language: English  
The **reconfigurable multiple bus machine (RMBM)** is a model of parallel computation based on **reconfigurable buses**. Unlike other **reconfigurable bus** -based models such as the **reconfigurable mesh (R-Mesh)**, the RMBM separates the functions of processors and switches. In this paper, we present constant time RMBM algorithms for a number of fundamental graph problems. These algorithms are more efficient, in terms of processors, than corresponding R-Mesh algorithms. Also presented is a novel range reduction technique for a constant time simulation of each step of a Priority CRCW RMBM on a Common or Collision CRCW RMBM. This simulation incurs only a factor of  $O(P \text{ SUP element of } )$  increase in the number of processors and buses, where element of  $> 0$  is any constant and  $P$  is the number of processors in the simulated Priority CRCW RMBM. This method may be of independent interest. The algorithms presented in this paper demonstrate the potential for fast and processor-efficient computation available in the ability of a **reconfigurable bus** -based model to separate the functions of processors and switches.

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?